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BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268–0001

PERIODIC REPORTING (PROPOSAL SIX)	Docket No. RM2020-13

RESPONSES OF THE UNITED STATES POSTAL SERVICE
TO QUESTIONS 1-9 OF CHAIRMAN'S INFORMATION REQUEST NO. 5
(January 5, 2021)

The United States Postal Service hereby provides its responses to the above listed questions of Chairman's Information Request No.5, issued December 10, 2020. Order No. 5778 (Dec. 14, 2020) adjusted the response deadline. The questions are stated verbatim and followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorney:

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1. Please refer to the Variability Report that provides "flats workload peaks in October-November whereas letter workload typically peaks in December [;] both AFSM 100 and FSS operations consistently show substantially above-trend productivity during the October-November peak period [while the DBCS] shows a small above-trend productivity peak in December." Variability Report at 12, 16. Please also refer to Response to CHIR No. 4 that states "[a]s a preliminary indication of the magnitude of [seasonal] effects, the Postal Service estimated a model without lagged TPF, interacting a peak-period dummy variable $Dp(t)$ with the natural log of TPF." Responses to CHIR No. 4, question 2.b. The Postal Service also states "[t]he models use a December peak for DBCS operations and an October-November peak for AFSM100 and FSS operations." *Id.*

a. Please confirm that the whole month of December was considered a peak-period for DBCS operations and two full months of October and November formed a peak period for AFSM100 and FSS operations. If not confirmed, please explain how the peak periods were determined for different types of operations.

b. Please confirm that October-November was chosen as a peak period for AFSM100 and FSS operations based on productivity trends. If not confirmed, please describe the criteria used to determine the peak period for AFSM100 and FSS operations.

c. Please confirm that December was chosen as a peak period for DBCS operations based on productivity trends. If not confirmed, please describe the criteria used to determine the peak period for DBCS operations.

d. Please discuss whether the peak period for different types of operations might be different for different facilities or groups of facilities (*e.g.,* depending on the size of the facility or its geographical location). Please provide the analysis in support of your conclusion, if applicable.

RESPONSE:

a. Confirmed.

b. Not confirmed. The October-November peak period was chosen as a seasonal peak for flat-shape volumes, as indicated by AFSM100 and FSS TPF. Flat-shape mailings such as catalogs tend to peak in advance of the shopping seasons for Christmas and other December holidays. See Variability Report at 12-13.

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c. Not confirmed. The December peak was chosen as a seasonal peak for letter-shape volumes, as indicated by DBCS TPF. See Variability Report at 12-13. In addition, the Postal Service traditionally makes seasonal staffing and other operational changes to accommodate the December mailing peak.

d. Individual sites' volume peaks may differ from overall system peaks, for instance if they serve as origin or destination sites for large mailers or mail recipients with distinct seasonal volume patterns. Additionally, nonseasonal variations in volume could be larger than the seasonal variability in some cases. Nevertheless, most sites' automated letter and flat volume peaks coincide with the fall-winter mailing peak seasons, as shown in Table 1, below. For flat operations, the annual volume peak was in October or November for 84.8 percent of AFSM100 facility-years, and 98.0 percent of FSS facility-years. For DBCS operations, December was the peak month for 55.2 percent of facility-years, and the peak was in the extended October-January peak season in 94.9 percent of facility-years. For DBCS operations, the estimated peak-period elasticity coefficient is statistically significant for an October-January peak period interaction term using the approach in Chairman's Information Request No. 4, Question 2(b), similar to the result using a December peak, though the peak-period coefficient is smaller for the extended period (0.012 vs. 0.018). In the new folder associated with these responses, USPS-RM2020-13-6, see the file "analysis_seasonal_chir5q1.txt."

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Table 1. Frequency of volume peaks by calendar month, Proposal Six dataset

	Number of Facility-Years			Percent of Facility-Years		
Month	AFSM100	DBCS	FSS	AFSM100	DBCS	FSS
1	66	359	0	2.4%	10.9%	0.0%
2	1	1	0	0.0%	0.0%	0.0%
3	135	53	1	5.0%	1.6%	0.3%
4	36	6	0	1.3%	0.2%	0.0%
5	19	15	2	0.7%	0.5%	0.7%
6	0	1	0	0.0%	0.0%	0.0%
7	4	7	0	0.1%	0.2%	0.0%
8	11	32	3	0.4%	1.0%	1.0%
9	134	52	0	4.9%	1.6%	0.0%
10	1,375	923	30	50.4%	28.1%	10.3%
11	939	24	256	34.4%	0.7%	87.7%
12	7	1,816	0	0.3%	55.2%	0.0%
Total	2727	3289	292	100.0%	100.0%	100.0%

Source: USPS-RM2020-13-6, analysis_seasonal_chir5q1.txt.

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2. Please refer to the FY 2019 MODS Manual[1] that states "TACS wants to ensure all employees are paid; therefore, if an operation number has not been assigned to an employee, the clock ring is in an error status and more time and dollars are spent to correct. To counteract this situation, TACS has assigned MODS operation numbers based on the LDCs of the employee." FY 2019 MODS Manual at 22.

a. Please confirm that an employee that works at a mail processing facility needs to be assigned to a MODS operation during each hour of the workday in order to be paid for all hours he/she works during the day. If not confirmed, please explain.

b. Please discuss whether the procedure described in the quoted statement may result in biased workhour variability estimates. In your response, please discuss whether, to ensure the employees are paid for a full workday, there might be any incentives and/or opportunities to overstate the reordered workhours the employee spends operating DBCS, AFSM100, and FSS machines.

RESPONSE:

a. Confirmed.

b. Base operations represent a backup procedure for MODS workhour recording, rather than the primary means of assigning workhours to MODS operations. As noted in the M-32 MODS Handbook at page 25, "Non-exempt and craft employees must always be clocked into the operation where they are assigned. TACS uses the employee's assigned base operation number ***if no operation number is selected on the EBR*** for the three basic clock rings (i.e., BT, MV, IL)" (emphasis added).

[1] Docket No. ACR2019, Library Reference USPS-FY19-7, December 27, 2019 (FY 2019 MODS Manual), PDF file "M-32 MODS Handbook.pdf."

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As a practical matter, few workhours accrue to the LDC-specific default operation codes, as shown in the table below for FY2018-2019. It is unlikely that incorrect assignment of such small quantities of workhours relative to the total workhours covered by the Proposal Six analysis would materially bias the variability estimates.

Table 1. MODS workhours in TACS default operation codes, FY2018-2019

		Default Workhours (1)		LDC Workhours		Default % of LDC	
Operation	Description	FY2018	FY2019	FY2018 (2)	FY2019 (3)	FY2018	FY2019
281	LDC 11 TACS Default	40,639	14,504	36,231,384	35,799,291	0.112%	0.041%
282	LDC 12 TACS Default	1,475	964	7,710,228	7,279,343	0.019%	0.013%
283	LDC 13 TACS Default	2,108	15	20,545,168	21,741,943	0.010%	0.000%
284	LDC 14 TACS Default	447	404	18,353,125	17,530,622	0.002%	0.002%
285	LDC 15 TACS Default	41	0	2,055,194	1,902,896	0.002%	0.000%
286	LDC 16 TACS Default	110	60	9,616,626	9,582,567	0.001%	0.001%
287	LDC 17 TACS Default	1,120	398	55,831,798	54,712,167	0.002%	0.001%

(1) MODS data; USPS-RM2020-13-6, TACS_Default_MODS.xlsx

(2) Docket No. ACR2018, USPS-FY18-7 part1.xlsx, worksheet "I-2A. CPool % of LDC hrs-MODS"

(3) Docket No. ACR2019, USPS-FY19-7 part1.xlsx, worksheet "I-2A. CPool % of LDC hrs-MODS"

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3. Please refer to the Variability Report explaining that "[t]he workhours associated with operating running machines cannot be separated from the workhours for the other component activities." Variability Report at 8.

a. Please confirm that the workhours for an individual worker in a workday are calculated as the sum of hours during which he/she is assigned to the machine and not the sum of hours when he/she actually operates the machine. If not confirmed, please explain how the workhours are calculated.

b. Please identify the activities included in the workhours variable used for regression analysis in Proposal Six.

RESPONSE:

a. Not confirmed. The workhours for an individual worker are calculated as the sum of hours during which the worker is clocked into various MODS operations. See the M-32 MODS Handbook at 28-29. For automated distribution operations, the total workhours are conceptually equal to the time spent actually operating the machine plus the time spent on other work activities while clocked into the operation(s). However, only the total time spent clocked into the operation(s) is observable, as indicated in the quoted passage in the Variability Report.

b. As discussed in the Variability Report at pages 6-9, the activities included in the workhours variable may be partitioned into several component activity groups:

- Runtime, or time spent operating the machine;
- Incidental allied labor, e.g., time spent moving mail or equipment to and from the machine and staging areas while clocked into the distribution operation;
- Setting up and taking down machines or runs;

- Waiting time;
- Overhead time including clocking in/out and breaks/personal needs time.

For additional description of activities included in MODS distribution operations, upon which the categorization of activities in the Variability Report is based, please see the M-32 MODS Handbook at pages 21-22, as well as the operation descriptions in Appendix A for AFSM 100 (pp. 119, 134-135, 158), DBCS (p. 205), and FSS (p. 178).

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4. Please refer to the Variability Report explaining that "[t]he Runtime [includes] operating the running machine: loading the machine, sweeping the output bins or stackers in the course of the run, clearing jams, monitoring the machine operation (for manual operations, the equivalent is the time spent actually sorting mail into the cases or other receptacles)". Variability Report at 6-7. In addition, Variability Report indicates that "the machine runtime is observed, since it is reported to MODS via the webEOR system." *Id.* at 8. Please confirm that the runtime for a machine in a workday is calculated for different MODS activities listed above as the sum of the actual hours when the machine was operated during that day, and not the hours that were scheduled for that day. If not confirmed, please explain how the runtime is calculated.

RESPONSE:

Confirmed that the machine runtime reflects the actual amount of time in which machine(s) were run for each MODS operation number. However, note that the first quoted passage from the Variability Report describes ***labor*** activities involved in directly operating the machines, which is a component of the operation workhours; the second passage indicates that the actual ***machine*** operating time is reported to MODS via webEOR.

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5. Please refer to the Variability Report that states "the intercepts… [in the regression equations for machine runtime and workhours estimated using monthly data by plants (facilities)] potentially depend on volume-independent technological parameters, management considerations affecting staffing levels locally, and specific plants' processing network roles. Since these may differ systematically across facilities, the model allows for facility-specific intercepts. Failing to account for unobserved non-volume heterogeneity among facilities generally would lead to biased and inconsistent elasticity coefficient estimates." Variability Report at 20.

a. Please explain in detail how each of the three factors mentioned above (as well as other factors if applicable) may differ across facilities and discuss how these differences could affect the variability estimates for machine operations.

b. Please discuss whether the Postal Service could account for the unobserved "non-volume heterogeneity among facilities" by including explanatory variables that would capture the non-volume heterogeneity factors described above or others (if applicable) without using a fixed-effects model.

c. Please discuss whether such factors as average machine vintage, average number of employees per machine, number of bins per machine, and number of machines in each facility could cause non-volume heterogeneity among facilities.

d. If any data on factors which can cause non-volume heterogeneity among facilities is available, please provide this data for each machine type (DBCS, AFSM100, and FSS) and month/facility.

RESPONSE:

a. Facility-specific technological parameters relevant to distribution workhours include mail processing facility layouts and detailed machine configurations. Some facilities, particularly those in land-constrained dense urban areas, may have multi-floor layouts; others generally will differ in the relative locations and degree of clustering of machines and mail staging areas. These factors also may be determined in part by the portions of the Postal Service's delivery network served by individual facilities, which in turn are dependent on service and

geographical considerations. These factors cause differences in workhours (given a level of volume) largely through travel times required for work activities such as moving mail within operations and between operations and staging areas, as well as other on-the-clock time such as break- and clocking-related overheads.

Machine configurations may affect the number of processing runs needed to serve a given geographical area—for example, the number of delivery routes that can be combined for an incoming secondary or delivery point sequencing run depends in part on the number of output bins or stackers—and hence the amount of activity required to set up or take down processing runs. Machine configurations may also affect the mix of work activities (feeding, sweeping, and allied labor) in processing runs, especially for AFSM 100 equipment, and further may affect the flexibility of labor in some component activities within sorting operations by creating or relieving integer constraints on staffing. See Variability Report at 6; Bozzo Reply Report at 6-8.

Management considerations may include differences in staffing levels or labor practices reflecting local work agreements. Managers may take different approaches to potential tradeoffs among service quality, staffing efficiency, and staffing flexibility in light of local considerations, and may exhibit differences in management effectiveness.

Plants' network roles include designation as AADCs or ADCs, which affects the mix of processing schemes relative to sites that do not serve such roles, the

collection and/or delivery networks served by sites, and network connections to other processing facilities. These factors will partly determine processing equipment requirements and the complexity of mailflows within facilities.

As noted in the quoted statement from the Variability Report, if such factors affect workhours (given volume), then failing to account for their effects can lead to statistically biased or inconsistent elasticity estimates. Conversely, controlling for such effects in the event they were not actually present affects only the efficiency of estimation, but does not result in bias or inconsistency.

b. The Postal Service cannot completely account for non-volume differences across facilities, insofar as some of the key underlying factors are not observable or represent qualitative characteristics that are not readily quantifiable. As a result, it is unlikely that the use of the fixed effects model can be avoided. For example, facility management effectiveness is not directly observable. Effects of facility layouts on workhours are not likely to be simple parametric functions of available statistics such as total facility square footage. Other factors, particularly relatively slow-changing factors such as delivery network statistics, are quantifiable but tend to be highly collinear with facility fixed effects (see also the response to Chairman's Information Request No. 1, question 2(c)).

c. The cited factors are examples of technological parameters (machine vintage and machine configurations), management considerations (machine staffing levels), and network-related factors (number of machines per facility). Accordingly, they may be associated with non-volume differences across

facilities.

Of these factors, machine vintage may be least likely to materially affect workhours or machine runtime in itself. Older machines would not necessarily operate more slowly than newer machines of the same type. (To the extent an aging fleet of machines becomes more maintenance-intensive, the additional maintenance costs would be observed in piggybacked cost components for mail processing equipment maintenance rather than mail processing craft labor.)

d. No such data are available. Please see also the response to Chairman's Information Request No. 1, question 2(c).

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6. Please refer to the Variability Report that states "[w]hile productivities vary across plants for a number of reasons, extreme values may reflect idiosyncratic errors or other factors not fully captured by the model. Accordingly, the regression samples exclude observations where the measured labor productivity is below the 5th percentile or above the 95th percentile of the distributions of site-month observations." Variability Report at 21.

a. Please discuss whether the Postal Service considered or applied the Cook's D statistics to identify and remove outliers as it has previously done in variability analysis.[2] Please explain why this method was rejected and provide the underlying documentation, if applicable.

b. Please discuss any other methods the Postal Service considered or applied to address the issue of "extreme values" in the model. Variability Report at 21. Please explain why these methods were rejected and provide the underlying documentation, if applicable.

RESPONSE:

a. The Postal Service did not apply the Cook's distance (D) statistic to screen the dataset for the Proposal Six analysis. The productivity-based screen that was used was chosen as it is technically simple to apply and to update, and its performance can be assessed using *a priori* information on reasonable ranges of productivities for the mail processing equipment under analysis in the proposal. Statistical approaches to outlier screening such as Cook's D are more useful when applied to smaller datasets where it is more practical to review individual observations as candidates for elimination (as is the case in the cited analysis in Docket No. RM2014-6), and where anomalous observations may be likelier to substantially influence regression results.

[2] *See e.g.,* Docket No. RM2014-6, Library Reference USPS-RM2014-6-1, June 20, 2014, Word file "Rpt.Updat.PHT.Cost.Cap.Variab.docx" (Report on Updating the Cost-to-Capacity Variabilities for Purchased Highway Transportation) at 23.

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b. Other approaches to data screening considered for the Proposal Six analysis were described in the response to Chairman's Information Request No. 1, Question 6b.

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7. Please refer to Library Reference USPS-RM2020-13/1, September 15, 2020, folder "Analysis," data file "analysis_set.dta." The Commission's preliminary analysis shows that certain facilities are included in the sample used for regression model despite the data on these facilities was available by a few months only. In addition, the analysis shows that more November-December observations were excluded from the analysis than observations for other months.

   a. Please confirm that certain facilities have less than 10 months of data in the DBCS workhour regression model, and, specifically, these are facilities with site id 11, 46, 107, 194, and 246.

      i. If confirmed or partially confirmed, please explain why these facilities were included in the data sample and discuss whether their inclusion could introduce bias into the model.

      ii. If not confirmed, please provide the corrected results.

      iii. Please provide your analysis for similar facilities with less than 10 months of data in the AFSM100 and FSS workhour regression models.

   b. Please confirm that for facility with site id 11, all but one available months of data were excluded from the DBCS regression analysis because they were deemed as extreme values.

      i. If confirmed, please discuss whether it was appropriate to include such a facility into the sample used for regression model considering that the vast majority of monthly observations have been deemed as "extreme values" and excluded from the DBCS workhour regression analysis.

      ii. If not confirmed, please provide the corrected results for DBCS workhour regression model.

      iii. Please provide your analysis for similar facilities where the vast majority of monthly observations have been deemed as "extreme values" and excluded from the AFSM100 or FSS workhour regression models.

   c. Please refer to Table 1 below that provides the number and percentage of observations (by month) excluded from the DBCS workhour regression analysis as a result of labor productivity screening.

      i. Please confirm the results provided in Table 1 that in the months of November and December, a notably higher percentage of observations was excluded from the DBCS regression analysis than in the other months.

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ii. If the results shown in Table 1 are not confirmed, please provide the corrected results for DBCS workhour regression models.

iii. Please provide a similar analysis for the AFSM100 or FSS workhour regression models.

iv. If results provided in Table 1 are confirmed, please explain the reasons for such phenomena and discuss whether the exclusion of notably higher percentages of observations in the months of November and December, then in the other months, could introduce bias into the regression models.

Table 1
DBCS Workhour Regression:
Excluded Observations by Month (2016-2019)

Month	Included	Excluded	Total	% Excluded
[a]	[b]	[c]	[d]	[e] = [c]/[d]
1	756	86	842	10.21%
2	756	86	842	10.21%
3	756	85	841	10.11%
4	763	79	842	9.38%
5	754	88	842	10.45%
6	765	76	841	9.04%
7	764	77	841	9.16%
8	765	76	841	9.04%
9	766	75	841	8.92%
10	774	69	843	8.19%
11	739	103	842	12.23%
12	714	128	842	15.20%
Total	**9,072**	**1,028**	**10,100**	**10.18%**

Notes and Sources: Data are from "analysis_set.dta." Outliers identified using the following command in STATA: "generate outlier_flag = (!inrange(prod1, prod1_p5, prod1_p95)) if inrange(year, 2016, 2019) & !missing(l_tpf, l_hrs)."

RESPONSE:

a.-b. Confirmed.

i. With the exception of site 11, the limited number of included observations at the listed sites largely reflect the observations available in the Proposal Six

sample period prior to cessation of DBCS operations at those sites during the sample period. At site 11, the DBCS operation was in regular production throughout the sample period, but only the included observation was within the bounds of the productivity screen. The excluded observations for site 11 had productivities below the fifth percentile.

As a matter of econometric theory, there is no reason to expect that including a relatively small set of observations that are not anomalous in themselves would lead to biased regression estimates. As shown in Table 1, below, there is little effect of including observations from these sites on the Proposal Six variabilities.

ii. Not applicable.

iii. Ten sites have fewer than ten observations in the AFSM 100 regression sample for the Proposal Six variabilities, and two sites have fewer than ten observations in the FSS regression sample.

Seven of the AFSM 100 sites (site IDs 4, 7, 11, 38, 54, 81, and 169) reported AFSM 100 operations in use for the entire FY2016-2019 period. Most of the observations for those sites were excluded from the analysis because their AFSM 100 productivities fell below the 5th percentile productivity screen threshold for most of the FY2016-2019 sample period. The three other sites

(63, 340, and 371) had discontinued AFSM 100 operations during the sample period.

For FSS, site 46 discontinued its FSS operations during the FY2016-2019 period. Most observations for site 153 were excluded from the analysis as a result of exceeding the 95th percentile productivity screen threshold.

Table 1. Effect of excluding data from sites with fewer than 10 observations on Proposal Six workhour elasticities

	DBCS		AFSM 100		FSS	
	Elasticity	Std. Error	Elasticity	Std. Error	Elasticity	Std. Error
Proposal Six	0.976	0.032	0.774	0.091	0.804	0.070
Remove sites w/ <10 obs	0.977	0.032	0.775	0.092	0.806	0.070
Remove sites w/ 1 obs	0.976	0.032	0.774	0.091	0.804	0.070

Source: USPS-RM2020-13-6, results_seasonal_chir5q7a.xlsx

c.

i. Confirmed.

ii. Not applicable.

iii. Please see Tables 2 and 3, below.

iv. The observed differences in the percentages of observations screened are due in large part to systematic seasonal productivity differences between peak and off-peak months. As shown in the Variability Report at page 16, for example, December DBCS productivities tend to be below trend, while

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AFSM100 and FSS productivities in the fall peak period tend to be above-trend. Additionally, generally declining productivity in flats operations effectively increased the strictness of the lower 5 percent productivity screen cutoff for the FY2016-2019 period compared to the entire FY2007-2019 period for which the cutoffs are computed. As shown in Table 2, this effect was strongest for AFSM 100 operations, where 85.6 percent of the FY2016-2019 observations were retained in the Proposal Six analysis.

Table 4, below, shows elasticities based on alternative screens that eliminate these effects. One alternative approach computes the $5^{th}/95^{th}$ percentile productivity cutoffs based on data only from the FY2016-2019 period. A second approach additionally computes the cutoffs by month to eliminate peak/off-peak season effects on the strictness of the boundaries. The $5^{th}/95^{th}$ percentile productivity cutoffs using the alternative methods are shown in USPS-RM2020-13-6, file Q7c_cutoffs.xlsx. The regression analysis using the alternative screens shows little effect on the variabilities from these variations.

Additionally, none of the low-productivity AFSM 100 sites discussed in the response to part (a)(iii), above, have fewer than 10 observations included in the regression when the productivity cutoffs are based on FY2016-2019 data (using either alternative screening method).

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The minor impacts are to be expected for two reasons. First, a feature of the $5^{th}/95^{th}$ percentile cutoffs—including the results of the alternative cutoff calculations—is that the productivity values at those percentiles are well within ranges of operationally plausible values. As a result, observations just outside the cutoffs are unlikely to be materially erroneous observations. Including or excluding otherwise valid observations from a regression model does not cause bias or inconsistency of the estimates. Given the relatively large estimation datasets, it also is not unusual to find that observations that are not grossly erroneous are not statistically influential, and that relatively small differences in sample composition at the margins of the screening criteria also will not tend to materially affect the estimated variabilities.

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Table 2. Excluded observations by month (FY2016-2019), AFSM 100 workhour regressions

AFSM 100 Workhour Regression, FY2016-2019				
Month	Included	Excluded	Total	% Excluded
1	675	109	784	13.9%
2	669	114	783	14.6%
3	685	98	783	12.5%
4	682	103	785	13.1%
5	657	127	784	16.2%
6	650	134	784	17.1%
7	649	135	784	17.2%
8	662	123	785	15.7%
9	691	95	786	12.1%
10	720	67	787	8.5%
11	708	77	785	9.8%
12	611	174	785	22.2%
Total	8059	1356	9415	14.4%

Table 3. Excluded observations by month (FY2016-2019), FSS workhour regressions

FSS Workhour Regression, FY2016-2019				
Month	Included	Excluded	Total	% Excluded
1	145	22	167	13.2%
2	148	19	167	11.4%
3	151	16	167	9.6%
4	153	15	168	8.9%
5	155	12	167	7.2%
6	148	19	167	11.4%
7	150	18	168	10.7%
8	156	12	168	7.1%
9	157	10	167	6.0%
10	154	12	166	7.2%
11	149	18	167	10.8%
12	126	41	167	24.6%
Total	1792	214	2006	10.7%

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Table 4. Effects of alternative screens on estimated variabilities

	DBCS		AFSM 100		FSS	
Screen	Elasticity	Std. Error	Elasticity	Std. Error	Elasticity	Std. Error
Proposal Six (5% tails, FY2007-2019 data)	0.976	0.032	0.774	0.091	0.804	0.070
5% tails, FY2016-2019 data	0.977	0.031	0.755	0.082	0.801	0.073
5% tails, computed by month, FY2016-2019 data	0.976	0.031	0.753	0.082	0.809	0.072

Source: RM2020-13-6, analysis_seasonal_chir5q7c.txt; results_seasonal_chir5q7c.xlsx

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8. Please refer to the Variability Report that states "[w]hile there is relatively little reason to expect that machine runtime should materially depend on workloads other than current-period TPF, workhours may have a longer adjustment process due to limitations on the flexibility of USPS labor. The inclusion of lagged TPF terms allows for adjustment processes of workhours with respect to workloads over longer time scales." Variability Report at 20. Please also refer to the Response to CHIR No. 1 that states "the Postal Service uses same-period-last-year (SPLY) operating data reporting as a management tool, which is a potential channel by which previous-year operations may have some influence on current periods. The latter two factors militated in favor of including some lags, where the twelfth lag reflects SPLY effects and the first lag is intended to capture shorter-term labor inflexibilities." Response to CHIR No. 1, question 2.a.

a. Please confirm that variabilities estimated in Proposal Six measure a causal effect of an additional letter/flat mail piece being fed into a machine (DBCS, AFSM100, or FSS) on workhours spent on operation of that machine in that month.

b. If question 8.a. is confirmed, please also confirm that the lagged TPF terms in the extended workhour regressions should have, as described above, causal effect on current workhours, through, but not limited to, the two factors mentioned in a quoted above statement.

c. If question 8.a. is not confirmed, please provide economic interpretation of the variabilities estimated in Proposal Six as well as the interpretation of the coefficients on the natural log of lagged TPF terms in the extended variability equations estimated in Proposal Six.

RESPONSE:

a. Confirmed that the variabilities estimated for Proposal Six include the causal effect of additional mail pieces fed on workhours in the operation in the same month. However, the variabilities do not only include the contemporaneous effect, but also include longer-term effects via the lagged TPF terms. See also the responses to Chairman's Information Request No. 1, question 2, and Chairman's Information Request No. 2, question 2.

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b. Confirmed. The quoted statement describes the potential mechanisms for longer-term effects of marginal changes in letter or flat processing volumes on workhours in the operations. The magnitude of any such effects is an empirical matter.

c. Not applicable.

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9. Please refer to the Postal Service's list of processing facilities available at: *https://about.usps.com/news/electronic-press-kits/our-future-network/processing_facility_types.pdf* (Facility Fact Sheet); and to Library Reference USPS-RM2020-13/NP1, September 15, 2020, folder "Working Datasets," STATA data files "finlist07.dta" through "finlist19.dta" (Proposal Six Datasets) that include data for variable "type." Please also refer to the Variability Report that states "[f]ailing to account for unobserved non-volume heterogeneity among facilities generally would lead to biased and inconsistent elasticity coefficient estimates." Variability Report at 20.

a. If the types of processing facilities in Facility Fact Sheet are outdated, please provide the most recent list of such facility types with the similar description.

b. Please confirm that in Proposal Six Datasets, variable "type" identifies the facility type. If not confirmed, please describe variable "type."

c. For variable "type" in Proposal Six Datasets, please provide the description for different types, including, but not limited to "CSF," "P&D," and "PMF" similar to how it is done in Facility Fact Sheet.

d. Please identify the types (by "type" variable) that were included in regression analysis underlying Proposal Six and, if applicable, explain why certain types were excluded.

e. Please discuss whether volume-independent technological parameters (including, but not limited to, the three factors mentioned in the statement quoted from Variability Report) may differ systematically across types. Please provide relevant documentation or reference to relevant analyses.

f. Please explain the reasons why the "type" variable was not ultimately included as a control variable in the extended regression models used to estimate variabilities in Proposal Six.

RESPONSE:

a. There is no specific update to the Facility Fact Sheet available. However, many of the main types of processing facilities listed in the Facility Fact Sheet remain consistent with current facility classifications, with some exceptions as follows. First, Logistics and Distribution Centers (LDCs) have since been redesignated as Processing and Distribution Centers (P&DCs). The LDC designation change

predates the FY2016 start of the Proposal Six sample period. Second, remaining mail processing operations at Customer Service Facilities (CSFs) with mail processing equipment were assigned to new finance numbers designated as P&DCs or Processing and Distribution Facilities (P&DFs). The latter changes occurred in FY2017 and did not involve operational changes to the mail processing facilities themselves. The transition was handled by assigning both the old and new finance numbers to the same site ID to maintain continuity of the data.

b. Confirmed.

c. Table 1 below provides descriptions for the "type" variable in the Proposal Six dataset.

d. Facilities included in the Proposal Six analysis have nonzero values of the 'siteid' variable in the data files finlist07.dta through finlist19.dta, provided in USPS-RM2020-13-NP1. The facilities included in the analysis are MODS P&DCs and P&DFs, including facilities formerly classified as LDCs and CSFs with mail processing equipment, and mail processing annexes associated with the main facilities.

   The Proposal Six analysis generally excludes Network Distribution Centers (NDCs) and Remote Encoding Centers (RECs). NDCs have distinct network roles and equipment compared to MODS P&DCs and P&DFs. Notably, NDCs are equipped with Parcel Sorting Machines and conduct non-distribution handling

of USPS Marketing Mail. NDCs are distinguished from other MODS mail processing facilities as a separate cost pool group in the Cost Segment 3.1 model. RECs do not physically process mail and thus do not house operations included in Proposal Six. Additionally, while CSFs and other MODS facility types are not categorically excluded from the analysis, some finance numbers in MODS are excluded from the Proposal Six analysis because they do not report data for any of the Function 1 letter or flat distribution operations within the scope of the analysis.

e. The factors discussed in the response to question 5 of this Chairman's Information Request may differ across facility groups in the Facility Fact Sheet and/or Table 1. Notably, CSFs tend to be smaller facilities than other P&DCs, and sites formerly designated as LDCs may have distinct operation mixes from other P&DCs (e.g., some have no automated letter operations). However, since these higher-level facility groupings are relatively general—most facilities in the Proposal Six analysis fall in the Facility Fact Sheet's "Processing and Distribution Center" category—there are considerable differences among facilities within as well as between groups.

f. Facility type effects are not separately included in the Proposal Six regression models because, as largely constant facility characteristics, their effects are captured by the models' incorporation of facility fixed effects.

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Table 1. Facility type descriptions for the Proposal Six datasets.

Type	Description	Note
AMF	Air Mail Center/Facility	
NDC	Network Distribution Center	Formerly Bulk Mail Centers (BMCs)
CSF	Customer Service Facility	
DDC	Delivery Distribution Center	Processing and distribution facility subtype, focused on incoming letter and flat distribution
HSP	Surface Transportation Center	
ISC	International Service Center	
LDC	Logistics and Distribution Center	Facilities formerly designated as L&DCs are currently designated as P&DCs
MD2	Processing and Distribution Center/Facility	Legacy type designation used to identify MODS 2 (PC MODS) P&DCs/Fs
MIS	Miscellaneous	Includes mail processing annexes
P&D	Processing and Distribution Center/Facility	
PMF	Logistics and Distribution Center	Legacy type designation for former Priority Mail Postal Processing Centers, subsequently L&DCs
REC	Remote Encoding Center	